



PCT
IC2 d PCT/PTO 12 APR 2002

PATENT APPLICATION

Our File No.: 20010529.ORI

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re App : Lakjaya Buluwela et al : April 8, 2002
S.N. : 10/019,520 ✓ : Art Unit unknown
Filed : December 27, 2001
For : CONTROL OF GENE EXPRESSION

Hon. Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER RULE 1.56

Applicant(s) herein make available to the Patent and Trademark Office a copy of Form PTO-1449 which lists the following document(s), copies of which are enclosed. This Information Disclosure Statement is being filed in accordance with the following provision(s):

- ☐ 37 CFR 1.97(b)(1) Within three months of the filing date of the national application. No fee is required.
- ☐ 37 CFR 1.97(b)(2) Within three months of the date of entry of the national stage as set forth in § 1.491 in the international application. No fee is required.
- ☒ 37 CFR 1.97(b)(3) Before the mailing date of a first Office Action on the merits. No fee is required.
- ☐ 37 CFR 1.97(c) After the periods specified in 37 CFR 1.97(b), but before the mailing date of either: (1) a final action under § 1.113 or (2) a notice of allowance under § 1.311, whichever occurs first.

- [] The undersigned hereby certifies that each item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement; or
- [] The undersigned hereby certifies that no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in § 1.56(c) more than three months prior to the filing of this statement; or
- [] Enclosed is a check in the amount of \$200.00 for the fee set forth in 37 CFR § 1.17(p). The Commissioner is hereby authorized to charge any additional fees which may be required under 37 C.F.R. 1.17, or credit any overpayment, to Deposit Account No. 08-1265. Two copies of this sheet are enclosed.
- [] 37 CFR 1.97(d) After the mailing date of either (1) a final action under § 1.113 or (2) a notice of allowance under § 1.311, whichever occurs first, but before payment of the issue fee.
- [] Applicant(s) hereby petition the Commissioner of Patents and Trademarks to consider this information disclosure statement. Enclosed is a check in the amount of \$130.00 for the petition fee set forth in § 1.17(i)(1). The Commissioner is hereby authorized to charge any additional fees which may be required under 37 C.F.R. 1.17, or credit any overpayment, to Deposit Account No. 08-1265. Two copies of this sheet are enclosed.

The Examiner is requested to consider carefully the complete text of these documents in connection with the examination of the above-identified application in accordance with 37 CFR 1.104(a). It is requested that the documents listed on the attached Form PTO-

1449 be included in the "References Cited" portion of any patent issuing from this application (M.P.E.P. 1302.12), and that the Examiner initial and return a copy of the form to evidence consideration of the documents.

Dated: 4-8-02.

Respectfully submitted,

NIKOLAI & MERSEREAU, P.A.



A handwritten signature in cursive script, appearing to read "C. G. Mersereau".

C. G. Mersereau
Attorney for Applicant(s)
Registration No. 26,205
900 Second Avenue South
Suite 820
Minneapolis, MN 55402
Phone: 612-339-7461

CERTIFICATE OF MAILING

I hereby certify that the foregoing Information Disclosure Statement Under Rule 1.56, Form PTO-1449 and a copy of each cited reference to be filed in connection with application Serial No. 10/019,520 of inventor, Lakjaya Buluwela, filed December 27, 2001, for "CONTROL OF GENE EXPRESSION" is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Box DD, Washington, D.C. 20231 on April 8, 2002.

A handwritten signature in cursive script, appearing to read "Barbara L. Davis".

Barbara L. Davis
Secretary to C. G. Mersereau

Date of Signature: April 8, 2002



(2-92)
Sheet 1 of 4

| | | |
|--|----------------------------------|----------------------------------|
| Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary) | Document Number 20010529.ORI | Application Number 10/019,520 |
| | Applicant Lakjaya Buluwela | |
| | Filing Date December 27, 2001 | Group Art Unit |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----------------|------|------|-------|----------|-------------------------------|
|---------------------|-----------------|------|------|-------|----------|-------------------------------|

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation | |
|--|--------------------|----------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| | WO 98/54311 | 03/12/98 | PCT | | | | |
| | WO 99/02683 | 21/01/99 | PCT | | | | |
| | WO 99/23885 | 20/05/99 | PCT | | | | |
| | WO 00/41566 | 20/07/00 | PCT | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)

| | |
|--|---|
| | Grignani et al, NATURE, <i>Fusion Proteins of the Retinoic Acid receptor-a Recruit Histone Deacetylase in Promyelocytic Leukaemia</i> , Vol 391, 19 February 1998, pp. 815-818 |
| | Kevin Struhl, GENES & DEVELOPMENT, <i>Histone acetylation and Transcriptional Regulatory Mechanisms</i> , 1998, 12:599-606 |
| | Beerli et al, NATIONAL ACADEMY OF SCIENCES, <i>Toward Controlling Gene Expression at Will: Specific Regulation of the erbB-2/HER-2 Promotor by Using Polydactyl Zinc Finger Proteins Constructed From Modular Building Blocks</i> , 1998, pp. 14628-14633 |
| | Hsieh et al, NATIONAL ACADEMY OF SCIENCES, <i>CIR, a Corepressor Linking the DNA binding factor CBF1 to the Histone Deacetylase Complex</i> , pp. 23-28 |
| | Chien et al, MOLECULAR ENDOCRINOLOGY, <i>A Fusion Protein of the Estrogen Receptor (ER) and Nuclear Receptor Corepressor (NcoR) Strongly Inhibits Estrogen-Dependent Responses in Breast Cancer Cells</i> , Vol. 13, No. 12, 1999, pp. 2122-2136 |
| | Chen et al, EMBO JOURNAL, <i>Fusion Between a Novel Kruppel-Like Zinc Finger Gene and the Retinoic Acid Receptor-a Locus Due to a Variant t(11;17) Translocation Associated with Acute Promyelocytic Leukaemia</i> , Vol. 12 No. 13, 1993, pp. 1161-1167 |
| | Grozier et al, NATIONAL ACADEMY OF SCIENCES, <i>Three Proteins Define a Class of Human Histone Deacetylases Related to Yeast Hda1p</i> , Vol. 96, April 1999 pp. 4868-4873 |

| | |
|----------|-----------------|
| EXAMINER | DATE CONSIDERED |
|----------|-----------------|

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.



(2-92)
Sheet 2 of 4

| | | |
|--|----------------------------------|----------------------------------|
| Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary) | Document Number 20010529.ORI | Application Number 10/019,520 |
| | Applicant Lakjaya Buluwela | |
| | Filing Date December 27, 2001 | Group Art Unit |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----------------|------|------|-------|----------|-------------------------------|
|---------------------|-----------------|------|------|-------|----------|-------------------------------|

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation | |
|--|--------------------|----------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| | WO 01/00815A1 | 04/01/01 | PCT | | | | |
| | WO 00/42219 | 20/07/00 | PCT | | | | |
| | WO 00/73434A1 | 07/12/00 | PCT | | | | |
| | WO 96/06166 | 29/02/96 | PCT | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)

| | |
|--|---|
| | Guidez et al, BLOOD, <i>Reduced Retinoic Acid-Sensitive of Nuclear Receptor Corepressor Binding to PML- and PLZF-RARA Underlie Molecular Pathogenesis and Treatment of Acute Promyelocytic Leukemia</i> , Vol 91, April 15, 1998, pp. 2634-2642 |
| | Tora et al, EMBO Journal, <i>The Cloned Human Oestrogen Receptor Contains a Mutation Which Alters its Hormone Binding Properties</i> , Vol. 8, No. 7, pp. 1981-1986, 1989 |
| | Tilley et al, NATIONAL ACADEMY OF SCIENCES, <i>Characterization and Expression of a cDNA Encoding the Human Androgen Receptor</i> , Vol. 86, January 1989, pp. 327-331 |
| | Aharon Razin, EMBO Journal, <i>CpG Methylation, Chromatin Structure and Gene Silencing-a Three-Way Connection</i> , Vol 17, No. 17, 1998, pp. 4905-4908 |
| | David et al, ONCOGENE, <i>Histone Deacetylase Associated with mSin3A Mediates Repression by the Acute Promyelocytic Leukemia-Associated PLZF Protein</i> , (1998), 16, pp. 2549-2556 |
| | Lin et al, NATURE, <i>Role of the Histone Deacetylase Complex in Acute Promyelocytic Leukaemia</i> , Vol. 391, 19 February 1998, pp. 811-814 |
| | Horlein et al, NATURE, <i>Ligand-Independent Repression by the Thyroid Hormone Receptor Mediated by a Nuclear Receptor Co-Repressor</i> , Vol. 377, 5 October 1995, pp. 397-405 |

| | |
|----------|-----------------|
| EXAMINER | DATE CONSIDERED |
|----------|-----------------|

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.



(2-92)
Sheet 3 of 4

| | | |
|--|----------------------------------|----------------------------------|
| Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary) | Document Number 20010529.ORI | Application Number 10/019,520 |
| | Applicant Lakjaya Buluwela | |
| | Filing Date December 27, 2001 | Group Art Unit |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----------------|------|------|-------|----------|-------------------------------|
| | | | | | | |

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation | |
|--|--------------------|----------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| | WO 98/53057 | 26/11/98 | PCT | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)

| | |
|--|--|
| | Chen and Li, CRITICAL REVIEWS, Coactivation and Corepression in Transcriptional Regulation by Steroid/Nuclear Hormone Receptors, 8(2), 1998, pp. 169-190 |
| | Workman and Kingston, ANNU. REV. BIOCHEM., Alteration of Nucleosome Structure as a Mechanism of Transcriptional Regulation, 1998, 67:545-79 |
| | Perlmann and Vennstrom, NATURE, The Sound of Silence, Vol. 377, 5 October 1995, pp. 387-389 |
| | Wolffe, NATURE, Sinful Repression, Vol 387, 1 May 1997, pp. 16-17 |
| | Grunstein et al, NATURE, Histone Acetylation in Chromatin Structure and Transcription, 25 September 1997, Vol. 389 pp. 349-353 |
| | Pazin and Kadonaga, CELL, What's Up and Down With Histone Deacetylation and Transcription, Vol. 89, May 2, 1997, pp. 325-328 |
| | DePinho, NATURE, The Cancer-Chromatin Connection, Vol. 391, 5 February 1998, pp. 532-537 |
| | |

| | |
|----------|-----------------|
| EXAMINER | DATE CONSIDERED |
|----------|-----------------|

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.



(2-92)
Sheet 4 of 4

| | | |
|--|----------------------------------|----------------------------------|
| Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary) | Document Number 20010529.ORI | Application Number 10/019,520 |
| | Applicant Lakjaya Buluwela | |
| | Filing Date December 27, 2001 | Group Art Unit |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----------------|------|------|-------|----------|-------------------------------|
|---------------------|-----------------|------|------|-------|----------|-------------------------------|

FOREIGN PATENT DOCUMENTS

| | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation | |
|--|--------------------|------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Papers, Etc.)

| | |
|--|---|
| | Bestor, NATURE, Methylation Meets Acetylation, Vol 393, 28 May 1998, pp. 311-313 |
| | Grunstein, CELL, Yeast Heterochromatin: Regulation of Its Assembly and Inheritance by Histones, Vol. 93, May 1, 1998, pp. 325-328 |
| | Margolin, NATIONAL ACADEMY SCIENCES, Kruppel-Associated Boxes are Potent Transcriptional Repression Domains, Vol. 91 May 1994, pp. 4509-4513 |
| | Schultz et al, GENES AND DEVELOPMENT, TARGETING HISTONE DEACETYLASE COMPLEXES VIA KRAB-ZINC FINGER PROTEINS: THE PHD AND BROMODOMAINS OF KAP-1 FORM A COOPERATIVE UNIT THAT RECRUITS A NOVEL ISOFORM OF THE MI-2A SUBUNIT OF NURD, 2001, 15:428-443 |
| | Kim et al, PROC. NATIONAL ACADEMY SCIENCES, A Novel Member of the Ring Finger Family, KRIP-1, Associates With the KRAB-A Transcriptional Repressor Domain of Zinc Finger Proteins, Vol. 93, December 1996, pp. 15299-15304 |
| | |
| | |

| | |
|----------|-----------------|
| EXAMINER | DATE CONSIDERED |
|----------|-----------------|

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.